

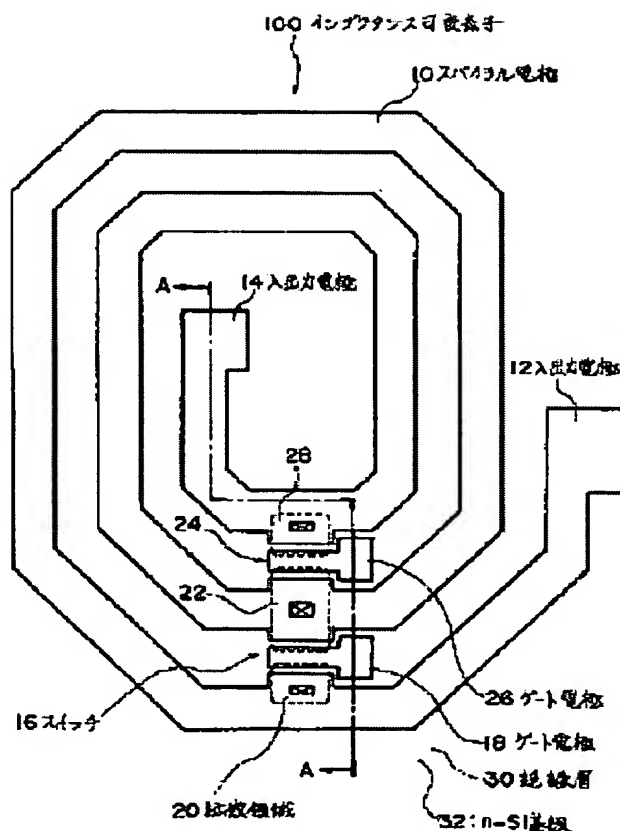
# INDUCTANCE-VARIABLE ELEMENT

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## Abstract of JP7142258

**PURPOSE:** To provide an inductance-variable element which can change inductance under control from the outside, has a simple constitution and can be formed integrally with a semiconductor component such as an integrated circuit or the like.

**CONSTITUTION:** An inductance-variable element 100 is constituted in such a way that a spiral electrode 10, in about 2.5 turns, which is formed on the surface of an n-Si substrate 32 via an insulating layer 30 and switches 16, 24 which are used to short-circuit individual circumferential parts of the spiral electrode 10 are included. Both ends of the spiral electrode 10 are used as input/output electrodes 12, 14 which have a wide-width shape. When only either the switch 16 or the switch 24 is set to an ON state, the element becomes a coil, in about 1.5 turns, in which the outermost circumferential part or the inner circumferential part of the spiral electrode 10 becomes invalid. When both switches 16, 24 are set to an ON state, the element becomes a coil in about 0.5 turn.



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